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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/667,078	09/18/2003	Chong Hin Chee	70020717-1	6786

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AGILENT TECHNOLOGIES, INC.  
Legal Department, DL429  
Intellectual Property Administration  
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Loveland, CO 80537-0599

EXAMINER

HUFFMAN, JULIAN D

ART UNIT	PAPER NUMBER
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2853

DATE MAILED: 11/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

AK

**Office Action Summary**

Application No.

10/667,078

Applicant(s)

CHEE, CHONG HIN

Examiner

Julian D. Huffman

Art Unit

2853

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --****Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12 September 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |  |
|---|--|
| <p>1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)</p> <p>2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)</p> <p>3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br/>Paper No(s)/Mail Date _____</p> | <p>4) <input type="checkbox"/> Interview Summary (PTO-413)<br/>Paper No(s)/Mail Date. _____</p> <p>5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)</p> <p>6) <input type="checkbox"/> Other: _____</p> |
|---|--|

## DETAILED ACTION

### *Claim Objections*

1. Claims 1-4 and 11-12 are objected to because of the following informalities:

In claim 1, the limitation "said edge" in the second to last line lacks antecedent basis. Applicant states that claim 1 refers to an edge and recites four choices for that edge, however the examiner disagrees. It is suggested that applicant use the language "at least one of said edges".

Claims 2-4 are objected to as being dependent from claim 1.

In claims 11 and 12, the language "depends of said" should read "depends on said".

Appropriate correction is required.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-9 are rejected under 35 U.S.C. 102(e) as being anticipated by Endo (US 20040246285 A1).

Endo discloses:

With regards to claim 1, a print mechanism (fig. 2) comprising:

a print head assembly (fig. 2, element 28) comprising a position detector (29) and a marking device (36), said position detector comprising an imaging device for forming an image of a portion of an edge of a print medium (sensor 29 detects various edges of the print medium as shown in fig. 9), said print medium having a top edge, side edges, and a bottom edge (figs. 2 and 9);

an actuator (fig. 2, element 30) for moving said print head assembly relative to said print medium in a predetermined direction (0101); and

a controller (fig. 7, element 54) for determining a location for said edge of said print medium from said formed image (page 7, 0133, Endo determines positions of the leading edge and side edges of the print medium and uses these values to calculate skew and the position of the print media, based on the position, borderless printing operations are controlled to eject ink onto the print medium and prevent waste from overspray of ink, see section 0118 and portions thereafter).

With regards to claim 2, the controller determines a brightness value for the print medium from the image (0099, sensor detects intensity of reflected light, which is used by controller to compare the intensity to a known intensity to determine if the paper is being detected, by detecting and determining the intensity of the reflected light, controller determines a brightness value for the print medium).

With regards to claim 3, the controller determines a location for said top edge of said print medium from said image (0133).

With regards to claim 4, the controller determines if said print medium is correctly aligned in said print mechanism by comparing a plurality of edge locations measured at different distances from said top edge of said print medium (0082, figs. 9 and 10).

With regards to claim 5, a method of printing on a print medium having a top edge, a bottom edge and side edges (figs. 2 and 9), said method comprising:

forming an image of a portion of one of said edges of said print medium (figs. 9 and 10, sensor detects leading and side edges of print medium and forms an image thereof); and

determining a location for said imaged edge of said print medium from said image (at each point of detecting, controller stores the location of detection, 0133).

With regards to claims 6 and 7, said imaged edge is one of said side edges or said top edge (sensor detects leading and side edges).

With regards to claim 8, determining a brightness measure for said print medium from said image (0099, sensor detects intensity of reflected light, which is used by controller to compare the intensity to a known intensity to determine if the paper is being detected, by detecting and determining the intensity of the reflected light, controller determines a brightness value for the print medium).

With regards to claim 9, determining the alignment of said print medium in a print mechanism by comparing a plurality of images of portions of said edge of said print medium (figs. 9 and 10, 0082).

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Endo in view of Wen (U.S. 6,109,745).

Endo discloses everything claimed with the exception of determining the a length and width of the print medium from a plurality of images of portions of an edge.

Wen discloses using a sensor to determine the length and width of print medium from a plurality of images of portions of edges of the print medium (column 3, lines 8-11).

It would have been obvious to one having ordinary skill in the art at the time of the invention to utilize a sensor to determine the width and length of the media by forming images of portions of edges, as suggested by Wen, for the purpose of enabling the device to automatically determine the size of the print medium so that during image processing, the image size may be adjusted in accordance with the size of the print medium (fig. 4).

6. Claims 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Endo in view of Miyakawa (U.S. 4,617,580).

Endo discloses everything claimed with the exception of dispensing a quantity of ink at one point on said print medium, wherein said quantity depends on a determined brightness.

Miyakawa discloses dispensing a quantity of ink at one point on said print medium, wherein said quantity depends on a determined brightness (a detector detects brightness of the sheet, transparencies, which reflect no brightness signal to the detector, are detected and printing is performed by ejecting a larger quantity of ink on a point of the print medium, column 5, lines 19-51).

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the teachings of Miyakawa into Endo for the purpose of providing a device which can print at an optimal density on any type of recording medium (column 3, lines 13-15).

### ***Response to Arguments***

7. Applicant's arguments filed 12 September 2005 have been fully considered but they are not persuasive.

Applicant's argument that the sensor of Endo is a single photodetector that detects changes in the reflectivity of the print medium as the detector moves across the print medium and that there is not teaching in Endo of forming an image of an edge with the sensor is noted. The limitation of forming an image is interpreted in light of applicant's specification. The specification explicitly describes a sensor with a single photodetector 14, which detects either light regions, or dark regions, and through the use of an algorithm employing a threshold, detects a transition from the light regions to the dark regions to find edges of the paper. This is what is meant in applicant's specification and claims by the word "imaging". This is exactly how the single photodetector of Endo operates (see 0127). Accordingly, this argument is not persuasive.

Applicant's argument that Endo measures the intensity of the output and not the brightness is noted. However, the intensity of the signal is a representation of the brightness of the light detected (see 0127, "the intensity of the reflected light differs for the case in which the target of the incident light is the print paper P and for the case in which it is not (namely, when the target is the platen 26) due to, for example, difference in color of the paper and the platen").

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).



***Conclusion***

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julian D. Huffman whose telephone number is (571) 272-2147. The examiner can normally be reached on 10:00a.m.-6:30p.m. Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Meier can be reached on (571) 272-2149. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Julian D. Huffman  
31 October 2005

  
K. PEGGINS  
PRIMARY EXAMINER  
4/05